CLAIMS

What is claimed is:

1. A semiconductor having a plurality of electrical components, comprising:

a varactor;

an inductor coupled to the varactor;

a switch; and

another inductor that is switched in parallel with the inductor by the switch and that forms a common area in the semiconductor enclosed by both the inductor and the other inductor with at least one of the varactor and the switch located in the common area.

2. The semiconductor of claim 1, further includes:

an at least one capacitor; and

another switch that switches the at least one capacitor in parallel with the varactor.

3. The semiconductor of claim 2, where the at least one capacitor is in the common area.

4. The semiconductor of claim 1, where the inductor and the other inductor that form the common area are offset in at least one of three dimensions from each other.

5. A VCO Structure, comprising:

a plurality of electronic components in a semiconductor material; and

an at least two inductors in the semiconductor material that form a common area that encloses at least one of the plurality of electrical components.

6. The VCO structure of claim 5, where one of the at least two inductors is offset in at least one of three dimensions from the other of the at least two inductors.

7. The VCO Structure, of claim 5, where one of the plurality of electrical components is a varactor.

8. The VCO structure of claim 7, where the plurality of electrical components further include:

an at least one tuning element that shifts the tuning band of the VCO; and

an at least one switch that results in the tuning element being electrically in parallel with one of the at least two inductors.

9. The VCO structure of claim 8, where the at least one tuning element is a capacitor.

10. The VCO structure of claim 8 including:

an at least one capacitor; and

another switch that switches in the at least one capacitor in parallel with the one inductor of the at least two inductors.

11. The VCO structure of Claim 5, where the VCO structure is formed in BiCMOS.

12. A method for forming a VCO Structure, comprising:

forming a plurality of electrical components upon a substrate; and

forming an at least two inductors so that they enclose a common area and at least one of the plurality of electrical components is located in the common area.

13. The method of claim 12, where the at least one of the plurality of electrical components is a varactor.

14. The method of claim 12, further includes:

offsetting one of the at least two inductors in at least one of three dimensions from the other inductor .

15. The method of claim 12, including:

forming an at least one tuning element upon the substrate that shifts the tuning band associated with the VCO structure; and

forming an at least one switch that results in the tuning element being electrically in parallel with at least one of the at least two inductors.

16. The method of claim 15, where the forming an at least one tuning element is forming a capacitor.

17. The method of claim 15, including:

forming an at least one capacitor upon the substrate; and

forming another switch that switches in the at least one capacitor in parallel with the at least one inductor of the at least two inductors.

20. A VCO method, comprising:

determining that a frequency band shift is needed;

switching an inductor in parallel with another inductor where the inductor and other inductor form a common area on a semiconductor that contains an electrical component.

21. The VCO method of claim 20, further includes:

switching a capacitor in parallel with a varactor when the inductor is not switched in parallel with the other inductor.

22. The method of claim 21, where the capacitor is located in the common area.

23. The method of claim 21, where the varactor is located in the common area.